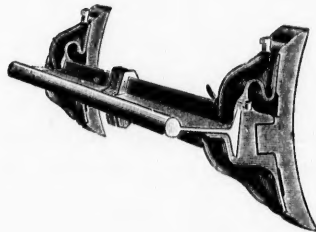


THE



Patented in the United States and Canada.

# MARDEN STEEL BRAKE BEAM,

—MANUFACTURED BY—

MARDEN CAR BRAKE COMPANY,

101 MILK ST., ROOM 8,

BOSTON, MASS., U. S. A.

J. O. WETHERBEE, President.  
W. O. SHELDON, Secy. and Treasurer.

# MARDEN STEEL BRAKE BEAM.

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The accompanying illustrations represent an improved Brake Beam, Brake Head and Fulcrum, patented by A. H. Marden, of Charlestown, Mass.

These Beams have been in use nearly four years, and there are now about ten thousand of them applied on passenger and freight cars, and on tenders of Locomotives.

It is a device worthy the attention of railroad economists.

The purposes of these inventions are—

1st. To substitute a durable, light steel beam, for the perishable wooden beam now in general use.

2nd. To provide a rigid beam, thereby preventing a recoil or secondary action, which results in an excess of power being applied to wheels, causing them to slide.

3d. To provide a securely attached malleable iron brake head, that shall be adapted to the most popular forms of brake shoes, which combine the greatest strength and least weight.

4th. To provide a brake beam and attachments, which in saving cost of repairs, diminishing the wear and damage of wheels and by lessening the time a car need be out of service, shall prove an economical substitute for any like appliance now known.

5th. To provide a brake beam which will make it sure that a train of cars can and will be stopped within at least one third less distance than is at present made with wooden beams.

## DESCRIPTION.

The Beam proper is made of steel, specially rolled for this purpose in form of a "deck beam."

Its proportions being such as to combine the greatest strength with the least weight, are as follows:

Width of beam 5 1-4 inches; thickness in the centre 3-8 inches, flange of the T 2 7-8 inches by 3-8 inches thick. Length of beam from centre of brake heads, 5 feet. Total length, 5 feet 5 1-2 inches.

The malleable iron head has the advantages of lightness, strength and adaptability. It is fastened to the steel beam very simply, but securely as follows:

A slot is cut in the lower edge of the T flange of the beam 1-4 inch deep and 3 1-2 inches long.

The head is cored out to fit the T flange, and when in position over the slot in the beam, a wrought iron key is driven in opposite the slot in the beam, which lifts the head into the slot and so secures it.

The key is made tapering at one end, with a half head at the other end. When driven home and the tapered end turned up, it secures the head firmly, and prevents all rattling.

To secure the brake head there are no pins nor bolts used, to work loose, nor nuts to work off and be lost.

The lever fulcrum is made in two parts for convenience, and is so constructed that it draws on the T flange of the beam, independent of the bolt which is used to secure it to the beam.

This brake beam with its attachments complete, weighs 87 lbs. and is as nearly imperishable as any brake beam can be, and in this respect will particularly commend itself to Railroad men, who are aware that a large item of expense is caused by the repairs and renewals of brake beams alone.

The introduction of "Air-Brakes" and the consequent increased strain upon the Brake Beams, has rendered the wooden beams now in use, unfit for the service required of them; and all railroad men will admit that something more rigid and durable must be found to take the place of them.

In placing the Marden Steel Brake Beam and attachments on the market, we feel confident we are offering a superior Beam and one which can be safely and profitably adopted by the railroads. The fact alone of its being practically indestructible and therefore always to be relied upon, should be sufficient to cause its general adoption. It is the only metallic beam made, combining *Strength*, *Simplicity* and *Neatness*, and the very low price at which it can be furnished, renders it an economical substitute for the wooden beam now in general use. In adopting this Beam, Railroad men should consider that it will undoubtedly last longer than any car on which it is placed, virtually outwearing three or four sets of wooden beams.

The application of "Air Brakes" to freight cars in the immediate future will necessitate replacing the wooden beams now used, with metallic beams of increased strength, and we believe nothing equal to the Marden Steel Beam can be found for this service. This beam is so constructed, that it can be placed either between or outside of the wheels, and occupies less space than "trussed" wooden beams.

A special feature of the Marden Steel Beam, and one which should be particularly borne in mind, is that it is rigid enough to withstand, without springing, any strain that can be applied to it with the "Air Brakes," making it certain that a train of cars can be stopped within a certain distance; where these Beams have been used, it has been demonstrated that a train of cars can be stopped much quicker than it can be with the wooden beams, rendering the time occupied in stopping at stations much less, and thereby increasing the speed of trains, without increasing the running expense.

Where the Marden Steel Beams have been used, it has been fully demonstrated that the flattening of wheels by sliding has been reduced more than 50 per cent, thus, in a short time, saving many times the cost of the Beams. With a beam as rigid as ours, it is not necessary to "set" the brakes tight enough to slide the wheels, as sufficient friction can be produced to stop a train within a specified distance, without "sticking" the wheels; all Railroad men will readily appreciate this fact.

The patents covering the Beam and attachments, granted to Mr. A. H. Marden, having been duly transferred to us, we shall take means to protect them against infringements, and we would advise all Railroad men before using other metallic beams, to fully satisfy themselves that the beams they adopt are not an infringement on our Patents. The action of the Eastern Railroad Association, in having our patents examined by competent legal authority and pronounced valid, should remove any apprehension Railroad men may have regarding the validity of our patents.

Heretofore the business of this company has been largely experimental, but now that the utility of our Beam and attachments has been fully demonstrated, we have determined to enter upon a vigorous prosecution of the business, and are prepared to meet, without delay, any demand that may be made upon us for beams. Railroads using other than the regular Christie shoe or the M. C. B. standard shoe, should, when ordering beams, if it is desired that a head should be made to fit their shoe, give us sufficient time to have the heads made and properly annealed. As we desire to use none but the best malleable iron casting, at least two weeks notice will be necessary in getting out work different from the above specified patterns.

For prices and any further information, address

MARDEN CAR BRAKE Co.

101 MILK ST.,

BOSTON, MASS.